VA7EWK's July 2010 Satellite Road Trip Around British Colombia

Patrick Stoddard, WD9EWK/VA7EWK
wd9ewk@amsat.org

Ever since I started working the amateur satellites, I enjoyed the thought of operating away from home. My first opportunities for this were in 2006, on trips to Dayton and the AMSAT Symposium in San Francisco. Starting in 2007, I took road trips to different locations (and different grids) around Arizona. During the summers of 2008 and 2009, I took road trips around northern Arizona and neighboring states. As I went to these places, I operated satellites from wherever I happened to be. Many of the grids I stopped in are rarely heard on the satellites. For my 2010 summer vacation, I decided to do another road trip, but not in the southwestern USA. I decided that the road trip would be around British Columbia in Canada, on the Lower Mainland as well as nearby Vancouver Island. I also planned to work satellites in SSB as well as FM on this trip; I only worked FM on the 2008 and 2009 road trips. I drove over 3000km (almost 1900 miles), operated from 9 different grid locators including one grid boundary and an international boundary, and logged almost 400 satellite QSOs. AO-7 had started a period of constant illumination, meaning I could use that satellite every other day in mode B. HO-68 was in FM for the week of 4-10 July. This turned out to be a great satellite for this trip, giving more opportunities for FM satellite QSOs with VA7EWK from several different grid locators.

For hams from the USA and many other countries, Canada is a simple place to operate from. Canada recognizes US amateur licenses and participates in the CEPT and IARP licensing schemes. Hams from other countries not covered by CEPT or IARP can request a temporary permit from Industry Canada. After making many trips to Vancouver in the late 1990s and early 2000s, I wrote the exams to obtain a Canadian amateur certificate in 2002 and received my VA7EWK call sign. More information about the Canadian amateur service is available online from the licensing authority, Industry Canada[1]. Additional information about amateur radio in Canada is available from the national organization, Radio Amateurs of Canada[2].

I booked a round-trip ticket for my flights between Phoenix and Vancouver, leaving Phoenix on 3 July 2010 and returning on 11 July. This would give me a full week in Canada, plus parts of two other days. I planned to split my trip into 2 parts – the first 4 full days on Vancouver Island, then the remainder of the trip in and around Vancouver. This turned out to be a perfect plan. I would have time to see the sights, take pictures, and work the radios. I brought a few radios on the trip: for FM, an Icom IC-T7H 2m/70cm HT and an Icom IC-2820H 2m/70cm mobile radio; for SSB, a pair of Yaesu FT-817NDs. Antennas used on this trip were an Elk Antennas handheld 2m/70cm log periodic and a Smiley Antenna 2m/70cm telescoping whip for the HT. This is my normal portable satellite station, so I was confident I could have success operating from wherever I happened to stop in Canada. The radios and accessories that were not banned from carry-on baggage went in a large laptop bag. The log periodic antenna and everything else for my radios went in a large duffel bag I used for my clothes, which was checked in at the ticket counter for the flights.

After arriving at Vancouver airport and clearing Customs on Saturday (3 July) afternoon, I rented a car – a Chrysler PT Cruiser. The PT Cruiser was larger than I needed, but it allowed me extra space to store radio equipment and quickly assemble it to work the satellites when on the road. I could leave my log periodic sitting fully assembled in the back of the car. I spent a couple of hours in and around Vancouver for lunch and some time to ensure all of my radio equipment survived the flight before taking a ferry over to Vancouver Island. I also decided to try out the radios on some satellite passes in the late afternoon from the Vancouver area, in grid CN89.

I found 3 passes in the span of an hour starting around 1745 local time (0045 UTC) – AO-51, FO-29, then AO-7 in mode B. I worked all 3, logging 13 QSOs on AO-51, 7 on AO-7, then 4 more on FO-29. After those passes, I packed the radios up for the drive across Vancouver to Horseshoe Bay, the ferry terminal I would use to get to Nanaimo on Vancouver Island. The ferry ride was 90 minutes, followed by a 90-minute drive from Nanaimo up Highway 19 to the city of Campbell River, at the CN79/CO70 grid boundary (50° North) where I would spend the next 3 nights. I arrived at the motel just before 0100 local time (0800 UTC), and quickly went to bed.

While on Vancouver Island for 4 days, I operated from 5 different grids. I started out on Sunday (4 July) at a spot on the 50th parallel near my hotel in Campbell River, on the CN79/CO70 grid boundary. On Monday (5 July), I drove to Port Hardy on the north end of the island in grid CO60. I had tried to find a spot on the northwest corner of the island in grid CO50, but the mountains in that area made that a bad option, so I spent most of the day along the waterfront in Port Hardy working many passes. After checking out of my motel in Campbell River on Tuesday (6 July) morning and working one more AO-7 pass at the CN79/CO70 grid boundary, I drove west toward the Pacific side of Vancouver Island. With one stop at Port Alberni, about 1/3 of the way to the island's west coast where I worked an HO-68 pass, I made it to Ucluelet on the coast in grid CN78 just in time for an AO-27 pass at 1255 local time (1955 UTC). I worked many passes in FM and SSB until the early evening, and drove back to Port Alberni for the night. On Wednesday (7 July), I drove down to Victoria (grid CN88) on the south end of the island. I operated from two locations outside Victoria during the morning, and more passes around midday from the Mile 0 monument – the western end of the Trans-Canada Highway, where I could look across the water to the south and see Washington state.

After the operating and walking around the center of Victoria, I drove north to the Swartz Bay ferry terminal and the *M/V Spirit of Vancouver Island* for a 95-minute ride to the Tsawwassen ferry terminal south of Vancouver. About halfway through the ride, around 2245 UTC, there was an AO-27 pass. I decided to try working this pass with my IC-T7H HT and a telescoping whip, instead of using my log periodic and attracting too much attention from the ferry crew. I only heard the satellite for about 3 minutes, and logged 2 QSOs while sailing through grid CN88hu and some small islands near Vancouver Island. Thanks to Jeff K7WIN (now K2AK) and Sawson KG6NUB for hearing me and being patient as I asked for repeats to complete these QSOs. The 7-minute timer expired as I attempted to log a QSO with Dale KL7XJ. These were my first QSOs from a ship, and I gained an appreciation for what satellite operators like Allen N5AFV, Andy W5ACM, and others have done on many cruises and ships.

After the ferry ride, I drove to my motel in Vancouver. The thermometer in the PT Cruiser showed the afternoon temperature in Vancouver at 36°C (96°F). This was not

as warm as I would have experienced back in Phoenix, but was warm with the humidity that I don't normally see back home. I decided to take a break from the radio for the evening. I had dinner at a nearby restaurant, then drove across to Burnaby and visited with John VE7JRX – a long-time Vancouver satellite operator.

I had some plans already made for Thursday (8 July) in and around Vancouver. I wanted to do some sightseeing south of the city, including the Peace Arch Park[3] at the Canada/USA border. I was also planning to attend a meeting of the North Shore Amateur Radio Club[4] in North Vancouver in the evening. I decided to do some operating on a few passes from Surrey, a suburb south of Vancouver, in the morning and early afternoon. I found a parking lot near Highway 99, the freeway from Vancouver to the border and the northern end of Interstate 5, and worked 4 passes. On 2 HO-68 passes, an AO-7 pass, and an AO-27 pass, I logged 19 QSOs before moving on to White Rock and then Peace Arch Park.

Before this trip, I thought about the possibility of operating from the Canada/USA border. Standing on the border is generally not permitted, but it is encouraged at Peace Arch Park. This park is actually two parks - a British Columbia provincial park and a Washington state park, divided by the international border. Through the middle of the park are border markers to the west and east of the arch. Within the park, it is legal to cross the border without any border formalities, provided you leave from the side of the park you entered. I took my HT, log periodic, and a camera from my car and walked to the arch. I took some pictures, and then identified the spot I would operate from – next to one of the border markers west of the arch and the southbound lanes of the highway running through the park (British Columbia Highway 99 to the north of the arch, and Interstate 5 to the south).

Due to the technology of the day when the border markers were established, none of them at Peace Arch Park are situated on 49° North, which is defined as the border by treaty. The 49° North line was actually at the US Customs building on the south end of the park. In the park, the border is just north of the CN88/CN89 grid boundary. I operated from grid CN89oa at that border marker, standing with one foot on each side of the border, and identifying my station as VA7EWK **and** WD9EWK. I worked two passes from here – a west-coast AO-27 pass around 2217 UTC, followed by an eastern AO-51 pass at 2307 UTC. I logged 6 QSOs

The VA7EWK satellite mobile station in Port Hardy, CO60

Close up of the VA7EWK satellite setup

The 50th parallel monument north of the CN79 - CO70 grid boundary

on AO-27, and 10 QSOs on AO-51. I printed special QSL cards for the QSOs made at this location; a VA7EWK QSL card on one side, and a WD9EWK QSL card on the other side. Both sides of the card had the same QSO information, and identifying the location at each side of the border marker (Surrey, British Columbia; Blaine, Washington, in Whatcom County).

Friday (9 July) morning started early. I wanted to drive up to Whistler, the ski resort about 2 hours north of Vancouver, where I hoped to operate from grid CO80. Once again, mountains and trees complicated my plans for satellite operating. I drove near the heliport north of Whistler Village at grid CO80ne for an HO-68 pass at 1643 UTC, and worked 8 stations in 5 minutes. This was not a great place to work satellites, as I only could see 1/3 of the HO-68 pass. I drove around more, scouting out other locations to work from, but missing other passes I could have worked. I grabbed some lunch, and took a long clockwise drive around the southwestern corner of British Columbia, something I had not planned on doing before this trip. I was able to work from two other locations in CO80 on later AO-27 passes – one overlooking Alta Lake west of Whistler Village in grid CO80me (6 QSOs in the 3 minutes I could hear AO-27), and the other northeast of Pemberton along Highway 99 in grid CO80tj (9 QSOs). I kept driving up the highway, and then started working my way south back toward Vancouver on Highway 12 and the Trans-Canada Highway. I stopped in two other grids for passes in the late afternoon.

I stopped along Highway 12 north of the Trans-Canada Highway and the town of Lytton for one AO-51 pass just after midnight UTC in grid CO90eg. This would be my only operating from grid CO90, and it was a good pass. Twenty stations went in the log here, from all over the continental USA and Alaska. After this pass, I drove about 30 minutes to a spot just into grid CN99 along the Trans-Canada Highway. I worked 3 passes from grid CN99gx in the town of Boothroyd – AO-7, FO-29, and AO-51 – in the span of an hour. Twelve more QSOs went in the log. I stopped at another point along the Trans-Canada Highway north of the town of Hope for an FO-29 pass around 0300 UTC, but logged no QSOs there. After a dinner break in Hope, I drove back to Vancouver for the night on the Trans-Canada Highway and planned a return to Whistler. I covered over 670km (416 miles) in this loop around British Columbia, along with operating from 3 different grids.

Saturday (10 July) morning came, and I wanted to make another try at operating from Whistler. The spot I stopped at near Alta Lake was the best spot I saw near Whistler Village, and went there for an SO-50 pass followed by an HO-68 pass around 1615 UTC. I logged 5 QSOs on SO-50, then 13 more on HO-68. This was a good spot, but I wanted a better operating location. I saw one, and decided to try for it. I packed my HT, log periodic, GPS, and a camera in a small duffel bag, then took the gondola to the top of Whistler Mountain. In the summertime, one can walk around the mountaintop, or use the ski runs for jogging and mountain bike riding. I was interested in sightseeing, plus riding the PEAK-2-PEAK gondola between the tops of the two main ski mountains here, Whistler Mountain and Blackcomb Mountain.

Before seeing the top of Blackcomb Mountain, I wanted to find a good spot on Whistler Mountain to operate from. I used an observation deck on the Roundhouse building at Whistler Mountain, at 1850m (6069 feet) elevation in grid CO80ma, and had no problems from here. I worked an SO-50 pass at 1755 UTC covering the Pacific coast, logging 5 QSOs. The next SO-50 pass at 1935 UTC yielded one QSO with Dale KL7XJ in Alaska, and then an AO-27 pass started just after that. I could hear the last 3 minutes of the 7-minute pass, but I could not get a signal through. I had been exchanging e-mails, text messages, and phone calls with Drew KO4MA, all in the hopes of making a QSO with him from grid CO80 while I was in this area. I told Drew I would try to work him first, and then work anyone else I could in the remaining time. I heard Drew call me with less than a minute to go on the AO-27 pass, and then I was able to get through to make a call back to him. We were able to make the QSO with about 10 seconds to spare, and this was my only QSO on the pass.

Before the next AO-27 pass, I took the PEAK-2-PEAK gondola over to Blackcomb Mountain, walked around and took pictures, then crossed back to Whistler Mountain in time for the AO-27 pass at 2120 UTC. I logged 6 QSOs on this pass, which was the final pass I worked for this trip. After taking pictures of the different 2010 Winter Olympics venues in and around Whistler, I returned to my hotel in Vancouver for my final night in Canada.

On Sunday (11 July), I did some sightseeing around downtown Vancouver, including Stanley Park, before going to Vancouver airport. When I returned the car to the rental-car agency at the airport, the receipt showed that I traveled 3024km (1879 miles). I checked in at the ticket counter, went through the airport security and US Customs checkpoints, and then flew home to wrap up this trip.

For this trip, I made 393 QSOs from 9 different grids – 5 on Vancouver Island (CN78, CN79, CN88, CO60, and CO70), and 4 on the Lower Mainland (CN89, CN99, CO80, and CO90). Here is a breakdown by mode and satellite, and by grid:

QSOs on FM Satellites	
AO-27	97
AO-51	112
HO-68	74
SO-50	48
84.2% of all QSOs - Total 331	

QSOs on SSB/CW Satellites	
AO-7	SSB - 30; CW - 2
FO-29	SSB - 23
VO-52	SSB - 7
SO-50	48
15.8% of all QSOs - Total 62	

QSOs by Grid	
CN78 - Ucluelet on Vancouver Island	56
CN79 - Port Alberni on Vancouver Island	21
CN79/CO70 - Campbell River on Vancouver Island	85
CN88 - Around Victoria and the Ferry	25
CN89 - Around Vancouver, including Canadian/USA Border	59
CN99 - North of Lytton, north of Vancouver	12
CO60 - Port Hardy on Vancouver Island	61
CO80 - Around Whistler, B.C.	54
CO90 - Boothroyd, northeast of Vancouver	20

Despite being so far north and not having all of the 7-minute repeater time on AO-27 passes, that satellite worked well for me during this week. Having HO-68 in FM for this week was a nice bonus. I was impressed with how well I was able to work AO-7 and FO-29, and those larger footprints helped in getting other operators some of these rarely-heard grids. Since the VO-52 passes were very close to the HO-68 passes, I ended up only working one VO-52 pass on this trip. I enjoy working VO-52, but HO-68's higher orbit and mode for this week (FM) made that the obvious choice for passes in the mid-morning hours.

Thanks to John K8YSE[5] for his assistance during this trip. He would be available via phone and e-mail to answer questions or look up information while I was traveling, and posted some messages to the AMSAT-BB list when I was not able to do so myself. John has done his share of road trips working satellites, along with other trips working HF from locations around the world. He has a wealth of information I could lean on. And a thank-you to all the satellite operators that made QSOs with VA7EWK during this trip.

73!

Notes:

1. Industry Canada: http://strategis.ic.gc.ca/radioamateur.e
2. Radio Amateurs of Canada: http://www.rac.ca/
3. Peace Arch Park: http://www.peacearchpark.org/
4. North Shore Amateur Radio Club (North Vancouver, BC): http://www.nsarc.ca/
5. John K8YSE: http://www.papays.com/sat/

(above) Monument demarking the Canadian/USA border

(left) The Peace Arch on the Canadian/USA border

Satellite gear on the observation deck at Whistler, B.C. in CO80

Downtown Vancouver from Stanley Park